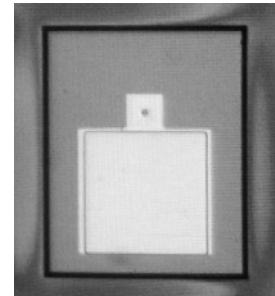


VCSEL Chip Specifications

V85SB - 0101 (SM)

Features

- Gaussian single-transverse mode
- Enhanced production uniformity (Patent)
- Good reliabilities and ESD resistance
- Cost effective
- Application: Light source for sensor, printer, and data communication



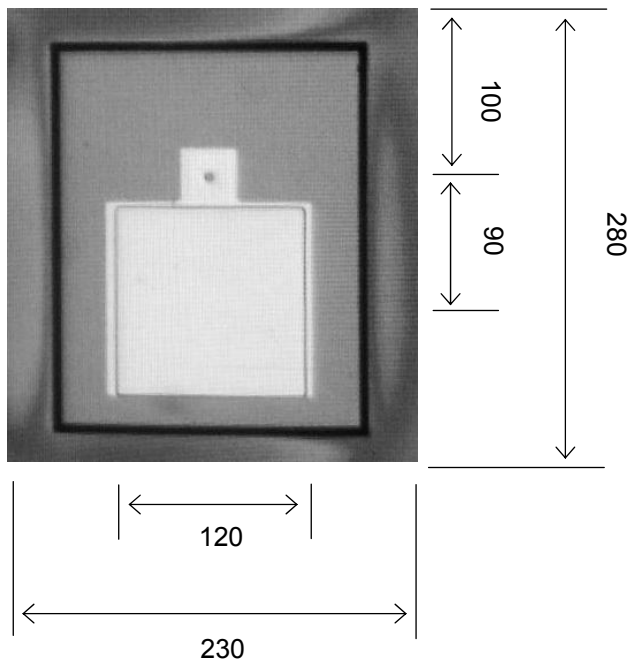
Laser Characteristics (Heat sink temperature T=25°C unless otherwise stated.)

Parameter	Symbol (Unit)	Min	Typ.	Max	Test Condition
Threshold Current	I _{th} (mA)	3.5	4.5	6.0	
I _{th} Temp. Variation	ΔI _{th} (mA)		0.5	0.8	0~70°C
Operating Current	I _{op} (mA)		6.0	8.5	P=1.0mW
Optical Output Temp. Variation	ΔPop (%)		±15%	±25%	0~70°C. Ref.: 1.0mW @ 25°C.
Slope Efficiency	η (W/A)	0.5	0.65	0.9	Avg value bet. 0.05~0.5mW
η Temp. Variation	Δη (ppm/°C)		-4500		0~70 °C
Forward Voltage	V _{op} (V)		2.3	2.7	I=6mA
Resistance	R (Ω)		130	190	I=6~7mA
Peak Wavelength	λ _p (nm)	840	850	860	
λ _p Temp. Variation	Δλ _p (nm/°C)		0.06		
Beam divergence	(Degree)	10	12	15	I=6mA
Side-mode Suppression Ratio	SMSR (dB)	20	25		I=6mA
Spectral Bandwidth	(nm)			0.1	I=6mA

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to +120°C
Operating Temperature	0 to 70°C
Lead Solder Temperature	330°C
Continuous Forward Current	10mA
Diode Reverse Voltage	5V at 10μA

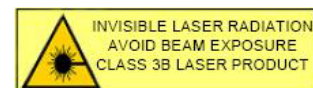
Dimensions



(in μm)

Notice

- VCSEL is an ESD-sensitive component. Please, take precautions during handling.
- This VCSEL is a Class-III laser device. Please, avoid eye exposure that may cause potential eye damage.



Typical Properties

1. Light -current-voltage (Liv) Curve

